Please **CANCEL** claims 9 and 17.

Please **AMEND** the CLAIMS as follows:

1.   (Currently Amended) In a network device, a method of performing NAT,

comprising:

maintaining a plurality of routing tables, each of the plurality of routing tables being

associated with a different <u>one of a plurality of</u> virtual private <u>networks</u> ~~network~~;

receiving a packet, the packet including an IP source address and an IP destination

address, the packet further including information indicating one of the plurality of routing

tables to route the packet;

performing NAT on the packet;

identifying one of the plurality of routing tables to route the packet;

identifying an entry in the one of the plurality of routing tables using the IP

destination address; ~~and~~

routing the packet using the identified routing table entry<u>;</u>

<u>receiving a default route advertised by a network device providing one or more</u>

<u>shared services, wherein each of the shared services is available to each of the plurality of</u>

<u>virtual private networks; and</u>

<u>updating each of the plurality of routing tables to include the default route to the</u>

<u>network device providing one or more shared services available to each of the plurality of</u>

<u>virtual private networks.</u>

2.   (Currently Amended)The method as recited in claim 1, wherein each <u>of the</u> virtual

private ~~network~~ <u>networks</u> is associated with a different customer.

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3. (Original) The method as recited in claim 1, wherein the network device is associated with an ingress interface of a service provider network.

4. (Original) The method as recited in claim 1, wherein the network device is associated with an egress interface of a service provider network.

5. (Original) The method as recited in claim 1, wherein the network device is associated with a service provider network.

6. (Currently Amended) In a network device, a method of performing NAT, comprising:

maintaining a plurality of routing tables, each of the plurality of routing tables being associated with a different one of a plurality of virtual private networks;

receiving a packet, the packet including an IP source address and an IP destination address, the packet further including information indicating one of the plurality of routing tables to route the packet;

performing NAT on the packet;

identifying one of the plurality of routing tables to route the packet;

identifying an entry in the one of the plurality of routing tables using the IP destination address; and

routing the packet using the identified routing table entry;

~~The method as recited in claim 1,~~ wherein performing NAT on the packet comprises:

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translating the IP source address from a private address to a public address when the packet is received from a network device in a private network.

7. (Currently Amended) In a network device, a method of performing NAT, comprising:

maintaining a plurality of routing tables, each of the plurality of routing tables being associated with a different one of a plurality of virtual private networks;

receiving a packet, the packet including an IP source address and an IP destination address, the packet further including information indicating one of the plurality of routing tables to route the packet;

performing NAT on the packet;

identifying one of the plurality of routing tables to route the packet;

identifying an entry in the one of the plurality of routing tables using the IP destination address; and

routing the packet using the identified routing table entry;

~~The method as recited in claim 1,~~ wherein performing NAT on the packet comprises:

translating the IP destination address from a public address to a private address when the packet is received from a network device in a public network.

8. (Currently Amended) The method as recited in claim 7, wherein the network device in the public network provides one or more services to each of the virtual private networks ~~network.~~

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9.   (Cancelled)

10.   (Currently Amended) In a network device, a method of performing NAT,

comprising:

        maintaining a plurality of routing tables, each of the plurality of routing tables being

associated with a different one of a plurality of virtual private networks;

        receiving a packet, the packet including an IP source address and an IP destination

address, the packet further including information indicating one of the plurality of routing

tables to route the packet;

        performing NAT on the packet;

        identifying one of the plurality of routing tables to route the packet;

        identifying an entry in the one of the plurality of routing tables using the IP

destination address; and

        routing the packet using the identified routing table entry;

The method as recited in claim 1, wherein the packet includes an MPLS tag indicating a

virtual private network, and wherein identifying one of the routing tables comprises:

        ascertaining the virtual private network from the MPLS tag; and

        identifying the one of the routing tables associated with the virtual private network.

11.   (Original)   The method as recited in claim 10, wherein the MPLS tag further

identifies the network device responsible for performing NAT and routing the packet.

12.   (Currently Amended) In a network device, a method of performing NAT,

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comprising:

    maintaining a plurality of routing tables, each of the plurality of routing tables being associated with a different one of a plurality of virtual private networks;

    receiving a packet, the packet including an IP source address and an IP destination address, the packet further including information indicating one of the plurality of routing tables to route the packet;

    performing NAT on the packet;

    identifying one of the plurality of routing tables to route the packet;

    identifying an entry in the one of the plurality of routing tables using the IP destination address; and

    routing the packet using the identified routing table entry;

~~The method as recited in claim 1,~~ wherein the packet includes an MPLS tag indicating a virtual private network, and wherein performing NAT on the packet comprises:

    ascertaining the virtual private network from the MPLS tag;

    identifying an entry in a translation table including the IP source address, the IP destination address, and a virtual private network identifier identifying the virtual private network; and

    performing NAT on the packet using the entry in the translation table.

13.   (Original)   The method as recited in claim 12, wherein identifying one of the routing tables to route the packet comprises:

    identifying the one of the routing tables from the entry in the translation table.

14.   (Currently Amended) In a network device, a method of performing NAT,

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comprising:

maintaining a plurality of sets of routing information, each of the sets of routing information being associated with a different one of a plurality of virtual private networks network;

receiving a packet, the packet including an IP source address and an IP destination address, the packet further including information indicating one of the plurality of sets of routing information routing tables to route the packet;

performing NAT on the packet;

identifying an entry in one of the sets of routing information using the IP destination address; and

routing the packet using the identified routing table entry;

receiving a default route advertised by a network device providing one or more shared services, wherein each of the shared services is available to each of the plurality of virtual private networks; and

updating the plurality of sets of routing information to include the default route to the network device providing one or more shared services available to each of the plurality of virtual private networks.

15. (Currently Amended) The method as recited in claim 14, wherein each of the sets of routing information corresponding to each of the plurality of virtual private networks network is stored in a separate routing table.

16. (Currently Amended) The method as recited in claim 14, wherein each of the sets of routing information corresponding to each of the virtual private network networks is stored

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in a single routing table, wherein each entry in the routing table includes a VPN identifier

identifying the corresponding <u>one of the</u> virtual private <u>networks</u> ~~network~~.

17.   (Cancelled)

18.   (Currently Amended) The method as recited in claim <u>14</u> ~~17~~, wherein updating the

sets of routing information comprises:

      updating a single routing table to include the default route.

19.   (Currently Amended) The method as recited in claim 18, wherein the single routing

table is dedicated to storing <u>the</u> default ~~routes~~ <u>route</u> to shared services available to each <u>of the</u>

virtual private <u>networks</u> ~~network~~.

20.   (Original) The method as recited in claim 18, wherein the single routing table stores

the sets of routing information.

21.   (Currently Amended) The method as recited in claim <u>14</u> ~~17~~, wherein updating the

sets of routing information comprises updating a plurality of routing tables to include the

default route, each of the plurality of routing tables being associated with a different <u>one of</u>

<u>the</u> virtual private <u>networks</u> ~~network~~.

22.   (Currently Amended) A computer-readable medium storing thereon computer-

readable instructions for performing NAT in a network device, comprising:

      instructions for maintaining a plurality of routing tables, each of the plurality of

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routing tables being associated with a different <u>one of a plurality of</u> virtual private <u>networks</u> ~~network~~;

instructions for receiving a packet, the packet including an IP source address and an IP destination address, the packet further including information indicating one of the plurality of routing tables to route the packet;

instructions for performing NAT on the packet;

instructions for identifying one of the plurality of routing tables to route the packet;

instructions for identifying an entry in the one of the plurality of routing tables using the IP destination address; ~~and~~

instructions for routing the packet using the identified routing table <u>entry;</u>

<u>receiving a default route advertised by a network device providing one or more shared services, wherein each of the shared services is available to each of the plurality of virtual private networks; and</u>

<u>updating each of the plurality of routing tables to include the default route to the network device providing one or more shared services available to each of the plurality of virtual private networks.</u>

23. (Currently Amended) A network device adapted for performing NAT, comprising:

means for maintaining a plurality of routing tables, each of the plurality of routing tables being associated with a different <u>one of a plurality of</u> virtual private <u>networks</u> ~~network~~;

means for receiving a packet, the packet including an IP source address and an IP destination address, the packet further including information indicating one of the plurality of routing tables to route the packet;

means for performing NAT on the packet;

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means for identifying one of the plurality of routing tables to route the packet;

means for identifying an entry in the one of the plurality of routing tables using the IP destination address; ~~and~~

means for routing the packet using the identified routing table entry;

receiving a default route advertised by a network device providing one or more shared services, wherein each of the shared services is available to each of the plurality of virtual private networks; and

updating each of the plurality of routing tables to include the default route to the network device providing one or more shared services available to each of the plurality of virtual private networks.

24.   (Currently Amended) A network device adapted for performing NAT, comprising:

a processor; and

a memory, at least one of the processor and the memory being adapted for:

maintaining a plurality of routing tables, each of the plurality of routing tables being associated with a different one of a plurality of virtual private networks ~~network~~;

receiving a packet, the packet including an IP source address and an IP destination address, the packet further including information indicating one of the plurality of routing tables to route the packet;

performing NAT on the packet;

identifying one of the plurality of routing tables to route the packet;

identifying an entry in the one of the plurality of routing tables using the IP destination address; ~~and~~

routing the packet using the identified routing table entry;

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receiving a default route advertised by a network device providing one or more

shared services, wherein each of the shared services is available to each of the plurality of

virtual private networks; and

updating each of the plurality of routing tables to include the default route to the

network device providing one or more shared services available to each of the plurality of

virtual private networks.

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